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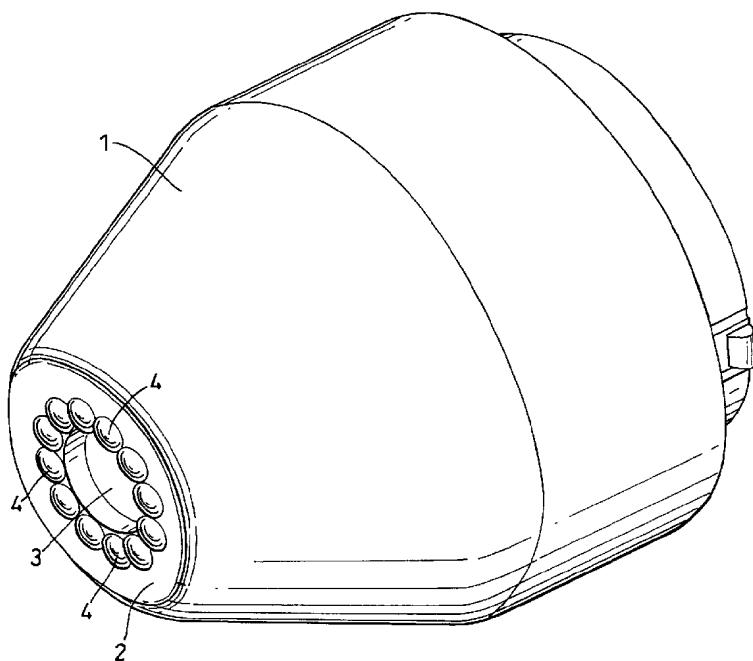
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: IMPROVEMENTS RELATING TO SKIN PRICKERS



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(57) Abstract: A skin pricker has a lancet which, when released, springs forward to project its tip momentarily through an aperture (3) in a platform (2) which is pressed against the user's skin. Surrounding the aperture there is an array of studs (4) proud of the platform (2) which indent into the skin around the puncture point to confuse the nerves in that area and make the prick less noticeable.

Improvements relating to Skin Prickers

This invention relates to skin prickers.

There are many different kinds of skin prickers,
mostly being spring loaded devices which fire disposable
5 lancets. Some pricking devices are entirely disposable
after a single use. But whatever form they take, there is
no avoidance of the fact that they puncture the skin of
the user and inflict pain. This may be trivial and
transitory, but many users would welcome its reduction,
10 while accepting its elimination is not really possible.

It is the aim of this invention, if not to reduce the
pain, at least to divert attention from it.

According to the present invention there is provided
a skin pricker comprising a housing with means for
projecting a lancet therein forwards, momentarily to
15 expose the tip of the lancet through an aperture in the
nose of the housing, wherein the aperture is in a platform
generally perpendicular to the direction of motion of the
lancet, characterised in that projections are provided on
20 the platform to press into the user's skin adjacent the
point to be punctured by the lancet.

The platform will usually be circular, with the
aperture at the centre, and the projections will
conveniently be in an annular array around the aperture.
25 Coned studs appear to be effective, but other shapes such
as serrations or elongate teeth arranged like the spokes
of a wheel could work. In any event, their shape, size

and spacing should be such that, when pressed against the skin, they should be felt by the user to the point of slight discomfort, but not be painful. The effect should be to confuse the nerves in the region of the impending prick so that, when that prick is made, it is less noticeable than it would otherwise be.

A proposed arrangement is shown, by way of example, in the accompanying drawing, which is a perspective view of the nose cone of a lancet firing device, or skin pricker.

The nose cone 1 terminates at its forward end in an annular platform 2 at right angles to the axis of the cone. The tip of the lancet (not shown) is projected through the central aperture 3. An annular array of studs 4 surrounds the aperture, standing slightly proud of the platform 2. Each stud 4 is of shallow conical form with the sharpness of its tip dulled by a very slight rounding.

Thus, in use, there will be twelve (in the example shown) points pressing into the skin around the prick point.

It will be understood that the number and arrangement of the studs may vary, and that their size and shape may differ. For example, the array could zigzag as it encircles the aperture, with generally pyramidal studs. Alternatively, there might be two arrays, one outside the other, with different numbers and spacing of the studs in the two arrays, and perhaps differently sized and shaped

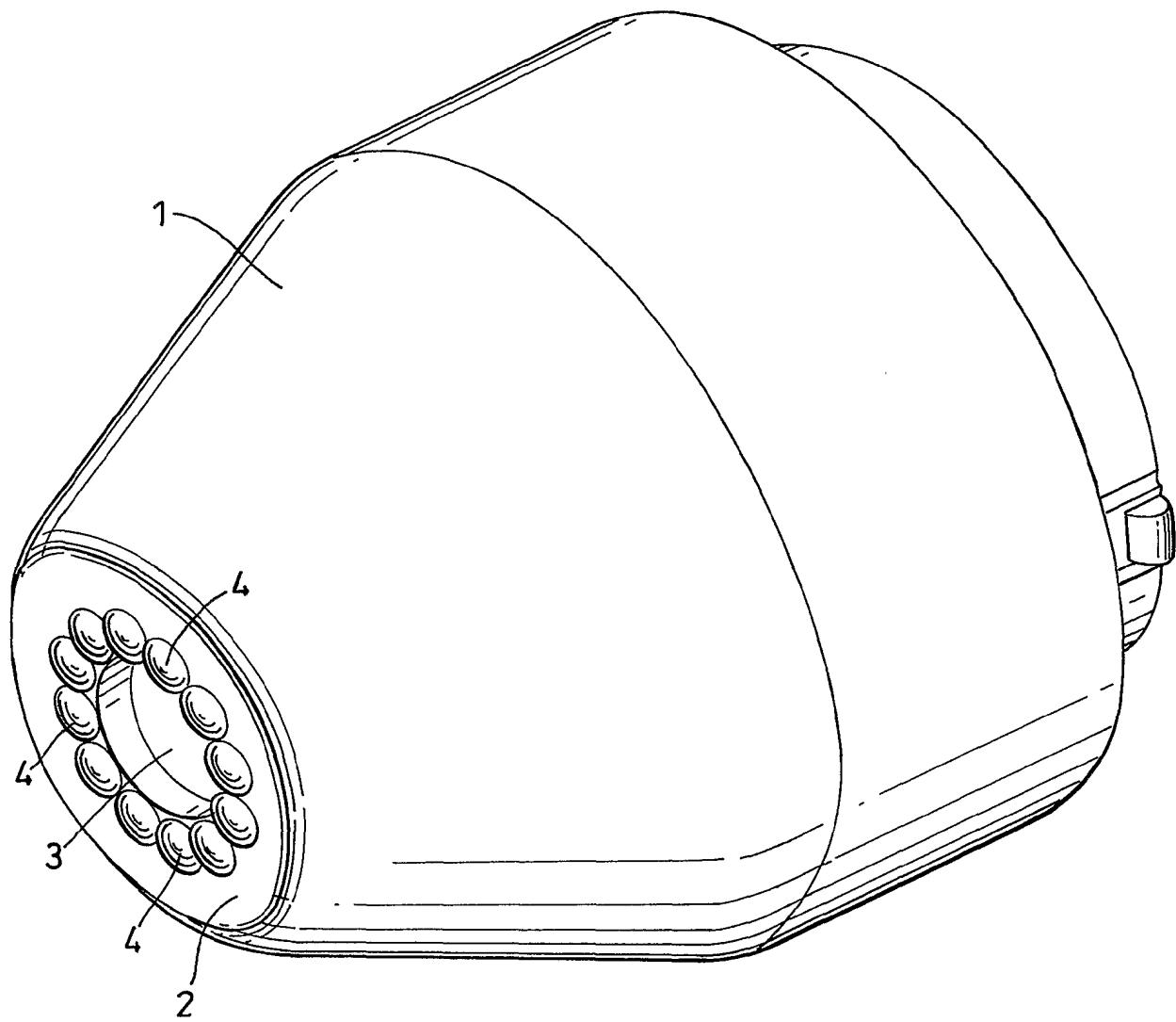
studs in the outer array compared with those in the inner array. There is also the option referred to above of serrations or teeth.

Given that a typical aperture 3 might be 3-4mm in
5 diameter, the drawing indicates the size of studs that have been found to be effective. But that is not intended to be limiting, and it is quite possible that a range of stud sizes may be provided, the user being able to choose,
10 by trial and error, which size and/or pattern is most beneficial.

Claims

1. A skin pricker comprising a housing with means for projecting a lancet therein forwards, momentarily to expose the tip of the lancet through an aperture (3) in the nose (1) of the housing, wherein the aperture (3) is in a platform (2) generally perpendicular to the direction of motion of the lancet characterised in that projections (4) are provided on the platform (2) to press into the user's skin adjacent the point to be punctured by the lancet.
2. A skin pricker as claimed in Claim 1, wherein the platform (2) is circular, with the aperture (3) at the centre, characterised in that the projections (4) are in an annular array around the aperture.
3. A skin pincher as claimed in Claim 1 or 2, characterised in that the projections are tapered studs (4).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61B5/15

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
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EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT
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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 85 04089 A (PALMER ET AL.) 26 September 1985 (1985-09-26) page 2, line 31 -page 3, line 7 page 5, line 11 - line 21; figures 1-8 -----	1-3
A	WO 97 08986 A (BIOSAFE DIAGNOSTICS CORP.) 13 March 1997 (1997-03-13) page 9, line 20 -page 10, line 8; figures 1-7 -----	1-3
A	EP 0 555 554 A (KABUSHIKI KAISYA ADVANCE) 18 August 1993 (1993-08-18) column 4, line 33 - line 46; figures 1-9 -----	1, 2
A	US 5 026 388 A (INGALZ) 25 June 1991 (1991-06-25) the whole document -----	1

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer
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Hunt, B

INTERNATIONAL SEARCH REPORT
Information on patent family members

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